PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:	10/510,993
Filing Date:	October 12, 2004
Applicant:	Stubbe et al.
Group Art Unit:	1713
Examiner:	Dr. Kelechi C. Egwim
Title:	Aqueous Dispersion of Inorganic Nanoparticles, Method for the Production and Use Thereof
Attorney Docket:	PAT-101026 (0906S-000431/NP)

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Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

APPLICANT'S APPEAL BRIEF UNDER 37 C.F.R. § 41.37

Sir:

This is an appeal from the final rejection mailed July 5, 2007, for which Appellants filed a Notice of Appeal on January 4, 2008. This Brief is submitted along with the fee due under 37 C.F.R § 41.20(b)(2).

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Real Party in Interest

The real party in interest is BASF Coatings Aktiengesellschaft, having a place of business at Glasuritstr. 1, 48165 Munster, Germany 48165, to which the inventors have assigned all rights in this invention. The assignment was recorded in the United States Patent and Trademark Office on November 19, 2004, at reel/frame: 015375/0909.

Related Appeals and Interferences

There are no related appeals or interferences.

Status of Claims

Claims 1-7 and 9-20 are pending and stand finally rejected. Claim 8 is cancelled. Claims 21-23 are withdrawn. This appeal is taken as to all of the rejected claims.

Status of Amendments

After the final rejection dated September 24, 2007, a reply under 37 C.F.R. § 1.116 was submitted on August 28, 2007 and was not entered by the Examiner, as stated on page 2 of the Advisory Action dated January 24, 2008.

Summary of Claimed Subject Matter

Independent claim 1 is drawn to an aqueous dispersion comprising four components – (A) a swellable polymer and/or oligomer; (B) surface-modified, cationically stabilized, inorganic nanoparticles; (C) an amphiphile or organic compound capable of forming chelate ligands; and (D) a crosslinking agent. Page 4, lines 19-26. The dispersion may be used in coatings such as a clearcoat or pigmented coating to produce highly scratch resistant and chemically stable moldings and films that are free from stress cracks. Page 4, lines 7-17.

Component (A) includes at least one swellable polymer and/or oligomer that contains at least one functional group. Page 5, line 26 to page 6, line 2. The functional group is an anionic functional group, a potentially anionic functional group, and/or a nonionic hydrophilic functional group. Page 6, line 3 to page 7, line 19.

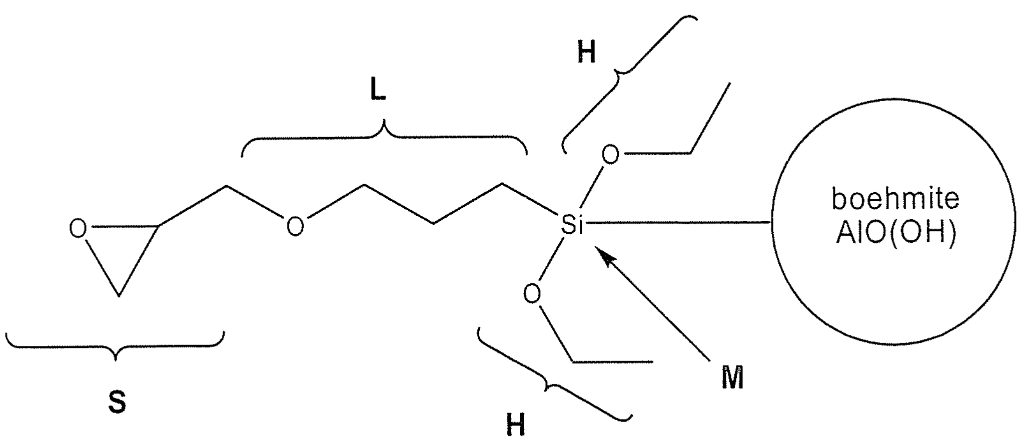
Component (B) includes surface-modified, cationically stabilized, inorganic nanoparticles of at least one kind. Page 9, lines 14-16. The surface of the nanoparticles is modified with at least one compound according to formula I: $[(S-)_o-L-]_m M(R)_n(H)_p$. Page 10, lines 3-5. The indices and variables in formula I are defined as follows: S is a reactive functional group; L is an at least divalent organic linking group; H is a hydrolyzable monovalent group or a hydrolyzable atom; M is a divalent to hexavalent main group or transition group metal; R is a monovalent organic radical; o is an integer from 1 to 5; m+n+p is an integer from 2 to 6; p is an integer from 1 to 6; and m and n are zero or an integer from 1 to 5. Page 10, line 6 to page 14, line 2. The reactive functional group, S, is able to enter into reactions with groups of their own kind or with complementary reactive functional groups. Page 10, lines 22-27; page 8, lines 1-18.

Component (C) includes at least one compound selected from the group consisting of amphiphiles and organic compounds which are capable of forming chelate ligands. Page 14, lines 16-17 and 30-31. Amphiphiles are molecules having both hydrophilic and lipophilic properties. Page 14, lines 18-29. Organic compounds able to form chelate ligands contain at least two functional groups which are able to coordinate with metal atoms or metal ions. Page 14, line 31 to page 15, line 8.

Component (D) is at least one crosslinking agent. Page 15, lines 15-16. The specification defines a crosslinking agent as a material containing reactive functional groups which are able to undergo reactions with themselves and/or with complementary reactive functional groups. Page 15, line 16 to page 16, line 31.

Finally, the pH of the aqueous dispersion is from 2 to 7. Page 5, lines 15-16.

The Examples in the present specification illustrate an aqueous dispersion constructed according to claim 1. A dispersion of a copolymer used as component (A) is disclosed in Preparation Example 1. Page 22, line 18 to page 23, line 7. An example of surface modification of nanoparticles using a compound of formula I to form component (B) is described in Preparation Example 2. Page 23, lines 8-15. In Preparation Example 2, a compound of formula I (glycidyloxypropyltriethoxysilane) is reacted with inorganic nanoparticles comprising a boehmite sol (aluminium oxide hydroxide (AlO(OH)) mineral), where an ethoxy group from the silicon atom leaves as ethanol following hydrolysis. Page 1, lines 23-25. Such nanoparticles may have the following representative structure upon reaction with the compound of formula I; respective portions of the compound are illustrated:



As shown above, the surface-modified nanoparticles have an organic group attached to the inorganic nanoparticle, where the organic group includes a reactive functional group (e.g., the glycidyl group, "S"). Example 1 illustrates a complete aqueous dispersion, including the above copolymer (A) from Preparation Example 1, the surface-modified nanoparticles (B) prepared in Preparation Example 2, ethyl acetoacetate as component

(C), and a melamine-formaldehyde resin (CYMEL® 327, hexamethoxymethyl type) as a crosslinker for component (D).

Dependent claim 2 is separately rejected. In addition to all the features of claim 1, the polymer and/or oligomer of component (A) in the aqueous dispersion has at a pH of from 2 to 7, and has an electrophoretic mobility $\leq$-0.5 (μm/s)/(V/cm). Page 6, lines 14-18; page 23, lines 5-7.

Grounds of Rejection to be Reviewed on Appeal

Claims 1, 3-7, and 9-20 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Kambe et al., U.S. Patent No. 6,599,631.

Claim 2 is rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as being unpatentable over Kambe et al., U.S. Patent No. 6,599,631.

<u>Argument</u>

Appellants submit that the 35 U.S.C. §§ 102(b) & 103(a) rejections based on the Kambe reference are flawed as the rejections constructed by the Examiner are founded on an improper reading of the present claims in view of the present specification and the general knowledge in the art. Moreover, when the claims are properly interpreted, the Kambe reference fails to disclose an aqueous dispersion having all of the presently claimed features, including at least one of each of the following: surface-modified, cationically stabilized, inorganic nanoparticles; a compound capable of forming chelate ligands; and a crosslinker. Finally, in the case of the § 103(a) rejection, the prima facie rejection is defective because no apparent reason is provided upon which to base modification of the Kambe teachings to include the missing features.

1. Kambe does not anticipate claims 1, 3-7, and 9-20 under § 102, as Kambe fails to teach an aqueous dispersion having the claimed surface-modified nanoparticles; a crosslinker; and a compound capable of forming chelate ligands.

The present invention as embodied in independent claim 1 is drawn to an aqueous dispersion that includes at least one kind of cationically stabilized, inorganic nanoparticles whose surface is modified with a compound of formula I. The aqueous dispersion also includes at least one crosslinker and at least one compound capable of forming chelate ligands. These three separate features are not found in the Kambe reference and consequently the present claims are novel and not anticipated. See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987) (each and every element as set forth in the claim must be present in the reference for the claim to be anticipated).

Proper claim interpretation is paramount to comparison of Appellants' claims with the Kambe disclosure. Appellants submit that the Examiner is misinterpreting the three separately recited features (surface-modified nanoparticles, crosslinking agent, and compound capable of forming chelate ligands) in the presently claimed aqueous

dispersion. Namely, the Examiner erroneously assumes the three different features may all be the same compound and may be described by the linker molecule in the Kambe disclosure. Such interpretation is inconsistent with the plain language found in claim 1 and with established precedent where the ordinary and customary meaning of a term may be evidenced by the words of the claims themselves and by the specification. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1314, 75 USPQ2d 1321, 1327 (Fed. Cir. 2005) (*en banc*).

Claim 1 includes *both* surface-modified nanoparticles and at least one crosslinking agent. In viewing the present specification as a whole, including the Examples therein, it is clear that the compound of formula I used to modify the nanoparticles and the crosslinking agent are separately recited and distinct features. See disclosure of compounds of formula I on page 10, line 3 to page 14, line 15; disclosure of crosslinking agents on page 15, line 15 to page 16, line 31; aqueous dispersion of Example 1, where boehmite surface-modified with glycidyloxypropyltriethoxysilane (illustrated above) is used with CYMEL® 327 (hexamthoxymethyl type) crosslinking agent; and page 16, lines 1-25 further illustrate melamine-formaldehyde resin crosslinking agents.

The separate crosslinking agent contains functional groups that are reactive with complementary groups on the polymer or oligomer, on the surface-modified nanoparticles, in the amphiphile, or with themselves. Page 15, lines 17-19. The crosslinker may be used to cure an applied coating film prepared using the claimed dispersion. Application of the dispersion to a substrate, by spraying for example, is followed by thermal curing and/or curing with actinic radiation. Page 19, lines 3-7; page 20, lines 9-11. Thus, the separate crosslinking agent can react with the various dispersion components, including the inorganic nanoparticles *already modified* with a compound of formula I, in order to form the cured coating or film. For example, the crosslinking agent may react with the reactive functional group (portion "S" of formula I) of the surface-modified inorganic nanoparticles.

The Examiner's contention that Appellants' separate claim limitations – surface-modified nanoparticles, crosslinking agent, compound capable of forming chelate ligands – may all be met by Kambe's single linker molecule is incorrect. On page 4 of the Office Action dated July 05, 2007, the Examiner states that the linker compounds may be used

"to form functionalized inorganic particles," but at the same time, "the linker compounds are crosslinking agents." In this construction, the Examiner seems to indicate that the Kambe linker molecule can account for the present compound of formula I that is used to surface modify the nanoparticles. However, the present claims include nanoparticles whose surface is *already modified* with a compound of formula I and a separate crosslinking agent. Moreover, illustration of compounds of formula I and illustration of crosslinking agents in the present specification demonstrate that these separately recited features are not the same portion of the claimed dispersion. See Background of Claimed Subject Matter, above.

Furthermore, on the same page of the same Action, the Examiner mistakenly reads the present claims as "not requir[ing] the crosslinking agents to be independent of either the polymer or the inorganic particle," as apparently justifying the reaction of the Kambe linker molecule with the Kambe inorganic particle as constituting the present crosslinking agent reacted with the present inorganic nanoparticles, where the present crosslinking agent and present compound of formula must apparently be the same. This construction is wholly inconsistent with the plain language of independent claim 1 and is contrary to the disclosure of these features in the present specification.

In contrast to the present claims, the Kambe reference does not teach a dispersion having nanoparticles whose surface modified is modified with a compound of formula I. Instead, the Kambe reference describes a solid composite formed from a dispersion of a polymer that is either chemically bonded directly to inorganic nanoparticles or bonded via an optional linker molecule. Kambe abstract; col. 1, lines 57-59; col. 4, lines 58-62; Kambe col. 5, lines 12-14. This dispersion is a reaction intermediate, where the inorganic particle, polymer, and optional linker are reacted together to form the composite. In this intermediate the particles are not surface modified. For example, in the Kambe dispersion, the optional linker molecules can first modify/react with the inorganic particles, or can first bond to the polymer, or the linker can bond to the inorganic particle and polymer simultaneously. Kambe col. 6, lines 33-40; col. 18, line 64 to col. 20, line 7. Notably, formation of the Kambe dispersion is consequent with reaction between the inorganic nanoparticles and polymer and optional linker. As Kambe specifies, "[c]onditions for the combined particle dispersion and

polymer dispersion/solution should be suitable for the formation of bonds between the linker, the inorganic particles and the polymer." Kambe col. 6, lines 53-56. Thus, the Kambe dispersion is merely a brief intermediate en route to formation of the polymer-inorganic particle composite.

Kambe does not therefore teach an aqueous dispersion of surface-modified nanoparticles, as any inorganic particle reacted with a linker molecule is simultaneously being consumed by subsequent reaction with the polymer. Kambe does not teach or contemplate a dispersion of inorganic particles that have their surface already reacted with the linker, and consequently, Kambe does not teach a dispersion having surface-modified, cationically stabilized, inorganic nanoparticles. And nowhere does the Kambe reference disclose nanoparticles modified with at least one compound of formula I (i.e., $[(S-)_o-L-]_mM(R)_n(H)_p$), as presently claimed.

In contrast, the optional linker in the dispersion described in the Kambe reference chemically bonds to the inorganic particle directly and also reacts with a terminal group of the polymer molecule. Kambe col. 5, lines 32-34 and 49-51. Therefore, in the Kambe dispersion, the linker molecule is not linking a surface-modified inorganic nanoparticle and a polymer molecule; it is bonding directly to an unmodified inorganic particle and to a polymer. Alternatively, if the present rejection presumes that the linker bonded to the inorganic nanoparticle is similar to the presently claimed surface-modified inorganic nanoparticle, then the Kambe reference fails to disclose a separate crosslinker within the dispersion.

In further distinction, the present specification discloses that the claimed crosslinking agent contains reactive functional groups which are able to undergo reactions with themselves and/or with complementary reactive groups found on the polymer or oligomer, surface-modified nanoparticles, or amphiphile. Page 15, lines 17-19. That is, the crosslinking agent contains groups that are reactive with the other components; the crosslinking agent is not already reacted with one or more of these other components. As such, the crosslinking agent is indeed "independent" of either the polymer or inorganic particle in the dispersion; contrary to the Examiner's assertion otherwise; see page 4 of the Office Action dated July 5, 2007.

To wit, only as a separate entity can the crosslinking agent react with the other claimed features in the various combinations as described; this would not be possible if the crosslinking agent was already bonded to one of the other components, for example as the compound of formula I that is reacted with the nanoparticles. Moreover, a crosslinking agent as generally understood in the art is a distinct and independent compound. See the tris(alkoxycarbonylamino)triazines described on page 16, lines 1-14; and melamine-formaldehyde resins (CYMEL® 327, hexamethoxymethyl type) in Examples 1 and 2.

In addition, on page 4 of the Office Action dated January 17, 2007 the Examiner states that the "crosslinking agent" in Kambe (presumably the linker molecule) has chelating ligand properties. However, this interpretation is inconsistent with the at least one compound selected from the group consisting of amphiphiles and organic compounds which are capable of forming chelate ligands, as found in present claim 1, and the separately recited crosslinking agent. Compare these two features as illustrated in the Background of Claimed Subject Matter, and where amphiphiles are monoalcohols or polyols (page 14, lines 18-29) and chelate ligands contain at least two functional groups able to coordinate metals (page 14 line 30 to page 15, line 8); see also the illustration of Example 1, where (C) is ethyl acetoacetate and (D) is a melamine-formaldehyde resin (CYMEL® 327, hexamethoxymethyl type). Consequently, the linker molecule according to Kambe does not account for the compound of formula I used to surface-modify the nanoparticles, the crosslinking agent, and the compound capable of forming chelate ligands, as found in claim 1.

It is evident from both the claim language and the specification that the compound of formula I, crosslinker, and compound having chelating ligand properties are not one and the same. The Kambe reference cannot anticipate the present claims as it fails to disclose each of these features. In view of these shortcomings, the present claims are novel over Kambe.

Accordingly, the 35 U.S.C. § 102(b) rejection based on Kambe should be REVERSED.

2. **Kambe cannot anticipate or establish a case of obviousness for claim 2 under § 103, as Kambe fails to teach all the claimed features and no apparent reason exists for a skilled artisan to include the missing subject matter.**

As illustrated in the preceding section, the Kambe reference fails to teach an aqueous dispersion comprising the three separate features of: surface-modified nanoparticles, a crosslinking agent, and a compound capable of forming chelate ligands. It is evident from the claim language and the present specification that these features are not one and the same. What is more, the Kambe reference and the general knowledge in the art both fail to provide an apparent reason to include the missing subject matter, as required by *KSR Int'l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1734, 82 USPQ2d 1385, 1391 (2007) (obviousness includes determining "whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue"). In the present case, claim 2 is therefore not obvious over Kambe as the reference fails to disclose all the presently claimed features and no apparent reason is identified by which a skilled artisan would modify the Kambe teachings to include the missing subject matter.

Kambe teaches a dispersion including (unmodified) inorganic particles, polymer, and optional linker molecule that are dispersed and/or combined in various orders to react the three components to form the composite. See Kambe dispersions at col. 18, line 64 to col. 21, line 20; composite formation at col. 21, line 21 to col. 23, line 57. Kambe is silent regarding a dispersion of inorganic nanoparticles whose surface is modified with a compound of formula I (i.e., $[(S\text{-})_o\text{-}L\text{-}]_m M(R)_n(H)_p$). Similarly, the dispersion used to form the composite does not include a separate crosslinking agent or a separate compound capable of forming a chelate ligand. The reference is therefore missing features of the present claims.

No apparent reason exists in the Kambe teachings by which a skilled artisan would be led to include the missing surface-modified inorganic nanoparticles, at least one crosslinking agent, and a compound capable of forming chelate ligands. Indeed, the Kambe reference teaches that the linker compound is optional and that the inorganic

particles can be directly bonded to the polymer. Kambe col. 4, lines 58-62. Thus, the focus in the Kambe reference is bonding the inorganic particles to the polymer to form a composite, whether a linker compound is used or not. There is no reason for a skilled artisan to further include inorganic nanoparticles that *already have* their surface-modified, a separate crosslinking agent, and a separate compound capable of forming chelate ligands in the dispersion used to form the composite.

The Kambe reference also only forms the dispersion as an intermediate in generating the composite. The inorganic particle, optional linker compound, and polymer are dispersed and bonded together. Kambe col. 6, lines 28-39 and 48-59. After the bonding is complete, the composite (of reacted products) is processed further. Kambe col. 6, lines 59-61. For example, the composite can be molded, extruded, or cast to form various shapes of materials, or the composite can be coated from a solvent-based slurry. Kambe col. 6, lines 62-67. Thus, the Kambe dispersion is reacted first and then the composite is further molded or coated. There is no reason for a skilled artisan to modify the surface of the nanoparticles using a compound of formula I and subsequently use the surface-modified nanoparticles in a dispersion; nor is there any reason for a skilled artisan to further include at least one crosslinking agent within the dispersion or a compound capable of forming chelate ligands.

Only the present claims teach a dispersion that can be applied to a substrate and subsequently cured using thermal energy and/or actinic radiation. That is, the presently claimed dispersion can be reacted after coating, whereas the dispersion in Kambe is reacted to form the composite and then is processed by molding, extruding, or coating. Kambe col. 6, lines 62-67. For example, the separate crosslinking agent of the present claims is used to cure the applied dispersion to form a crosslinked film. See Examples 1 & 2. The present dispersions are therefore useful in forming highly scratch-resistant, high-gloss, flexible, acid- and water-resistant, firmly adhering, antistonechip clearcoats as part of multicoat color and/or effect paint systems. Present specification page 18, lines 17-20.

The present rejection also fails to provide an apparent reason based on the general knowledge in the art by which a skilled artisan would include separate surface-modified nanoparticles, crosslinking agent, and compound capable of forming chelate

ligands within the dispersion taught by Kambe. A reason to combine or modify the references should be identified and made explicit in order to facilitate review, as noted by *KSR Int'l Co. v. Teleflex Inc.* at 1740-41, 82 USPQ2d at 1396. See also *In re Kahn*, 441 F3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning to support the legal conclusion of obviousness."). No explanation as to how or why a skilled artisan would include the missing features to recreate Appellants' claims is provided. Independent claim 1 and its dependent claims are therefore not obvious.

Accordingly, the 35 U.S.C. § 103(a) rejection based on Kambe should be REVERSED.

For these and the other reasons discussed above, Appellants respectfully request that the rejection of claims 1-7 and 9-20 be REVERSED.

Respectfully submitted,

Dated: 03/03/2008

By: William A. Ziehler

Anna M. Budde, Reg. No. 35,085
William A. Ziehler, Reg. No. 61,415
Attorneys for Applicant

Harness, Dickey & Pierce, P.L.C.
P.O. Box 828
Bloomfield Hills, MI 48303
(248) 641-1600

AMB/WAZ/akb

Claims Appendix

1. An aqueous dispersion, comprising

(A) at least one swellable polymer and/or oligomer containing at least one functional group that is at least one of an anionic functional group, a potentially anionic functional group, and/or a nonionic hydrophilic functional,

(B) surface-modified, cationically stabilized, inorganic nanoparticles of at least one kind, wherein the nanoparticles are modified with at least one compound of the general formula I:

$$[(S-)_o\text{-}L\text{-}]_m M(R)_n(H)_p \qquad \text{(I)}$$

in which the indices and variables have the following meanings:

S is a reactive functional group;

L is an at least divalent organic linking group;

H is a hydrolyzable monovalent group or a hydrolyzable atom;

M is a divalent to hexavalent main group or transition group metal;

R is a monovalent organic radical;

o is an integer from 1 to 5;

m+n+p is an integer from 2 to 6;

p is an integer from 1 to 6; and

m and n are zero or an integer from 1 to 5,

(C) at least one compound selected from the group consisting of amphiphiles and organic compounds which are capable of forming chelate ligands, and

(D) at least one crosslinking agent,

wherein the aqueous dispersion has a pH of from 2 to 7.

2. The aqueous dispersion of claim 1, wherein the at least one polymer and/or oligomer (A) contains anionic and/or potentially anionic functional groups, has at a pH of from 2 to 7, and has an electrophoretic mobility $\leq$-0.5 (μm/s)/(V/cm).

3. The aqueous dispersion of claim 1, wherein the at least one polymer and/or oligomer (A) contains at least one reactive functional group (S) selected from the group

consisting of (S1) reactive functional groups which contain at least one bond which can be activated with actinic radiation and/or (S2) reactive functional groups which are able to undergo reactions with groups of their own kind and/or with complementary reactive functional groups.

4. The aqueous dispersion of claim 3, wherein the reactive functional groups that are complementary to the reactive functional groups (S2) of the at least one polymer and/or oligomer (A) are present in the surface-modified nanoparticles (B), in the amphiphile, and/or in the at least one crosslinking agent (D).

5. The aqueous dispersion of claim 1, wherein the inorganic nanoparticles (B) are selected from the group consisting of main group and transition group metals and their compounds.

6. The aqueous dispersion of claim 5, wherein the main group and transition group metals are selected from the group consisting of metals of main group three, metals of main group four, metals of main group five, metals of transition group three, metals of transition group four, metals of transition group five, metals of transition group six, metals of group one, metals of group two, and the lanthanides.

7. The aqueous dispersion of claim 6, wherein the metals are selected from the group consisting of boron, aluminum, gallium, silicon, germanium, tin, arsenic, antimony, silver, zinc, titanium, zirconium, hafnium, vanadium, niobium, tantalum, molybdenum, tungsten, and cerium.

9. The aqueous dispersion of claim 8, wherein the at least one polymer and/or oligomer (A) contains at least one reactive functional group S selected from the group consisting of (S1) reactive functional groups which contain at least one bond which can be activated with actinic radiation and (S2) reactive functional groups which undergo reactions with groups of their own kind and/or with complementary reactive functional groups.

10. The aqueous dispersion of claim 9, wherein the reactive functional groups that are complementary to the reactive functional groups (S2) are present in the at least one polymer and/or oligomer (A), in the amphiphile, and/or in the at least one crosslinking agent (D).

11. The aqueous dispersion of claim 1, wherein the amphiphile is selected from the group consisting of monoalcohols and aliphatic polyols.

12. The aqueous dispersion of claim 11, wherein the monoalcohols are selected from the group consisting of monoalcohols having from 3 to 6 carbon atoms in the molecules and the aliphatic polyols are selected from the group consisting of diols having from 3 to 12 carbon atoms in the molecule.

13. The aqueous dispersion of claim 1, wherein the organic compounds which form chelate ligands are selected from the group consisting of compounds containing at least two functional groups which are able to coordinate with metal atoms or metal ions.

14. The aqueous dispersion of claim 1, wherein the at least one crosslinking agent (D) contains at least one reactive functional group which is able to undergo reaction with at least one complementary reactive functional group (S2) present in the at least one polymer and/or oligomer (A), on the surface-modified nanoparticles (B), and/or in the amphiphile.

15. The aqueous dispersion of claim 14, wherein the at least one reactive functional group of the at least one crosslinking agents (D) is selected from the group consisting of N-methylol groups, N-methylol ether groups, and alkoxycarbonylamino groups.

16. The aqueous dispersion of claim 15, wherein the at least one crosslinking agent (D) is selected from the group consisting of amino resins and

tris(alkoxycarbonylamino)triazines.

17. The aqueous dispersion of claim 16, wherein the amino resins comprise melamine-formaldehyde resins.

18. The aqueous dispersion of claim 2, wherein when complementary reactive functional groups are present in the at least one polymer and/or oligomer (A) and/or the amphiphile they are hydroxyl groups.

19. The aqueous dispersion of claim 1, further comprising at least one pigment (E).

20. The aqueous dispersion of claim 19, wherein the pigment (E) is selected from the group consisting of color pigments, optical effect pigments, electrically conductive pigments, magnetic pigments, magnetically shielding pigments, fluorescent pigments, phosphorescent pigments, corrosion inhibitor pigments, extender pigments, and pigments which have at least two of these properties.

Evidence Appendix

There is no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132.

Related Proceedings Appendix

There have been no related appeals and interferences and therefore no related decisions exist.